SCHOOL OF SCIENCE & ENGINEERING SPRING 2023

CSC 3326 Database Systems

Term Project: Project Proposal

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Realized by:

Hiba Msatfa

Adnane Ahroum

Chaima Aissi

Supervised by:

Professor BOUANANE, Lamiae

Table of Content:

I. Introduction:

Giving blood is essential for various medical procedures, such as organ transplants, cancer treatments, and emergency situations. To donate blood, a person needs to either locate a blood bank or attend a blood donation event. However, the current manual blood donation system has several disadvantages. These include the prolonged time required to obtain necessary data, an increased likelihood of errors in the data collection process, the need for a considerable number of personnel to facilitate the process, insufficient donor information, a protracted data collection time, and a low accuracy rate.

Suppose that **GoldenBlood** is a company that conducts blood donation events, and sells blood to individuals and hospitals. However, the company is facing some issues with its current approach. To address these issues, our team has decided to create a web-based application for **GoldenBlood** that can streamline the blood donation process, making it more secure, reliable, and efficient. The goal is to reduce the possibility of errors, shorten the time required for the process, and ensure the security of data, while also improving the storage and retrieval of information for greater efficiency.

The title that we chose for this project is **GoldenBlood.**

The team members are Hiba Msatfa, Adnane Ahroum, Chaima Aissi.

II. Requirements Gathering:

The aim of this project is to manage data related to blood donors, recipients, and the current stock. The process involves an individual physically coming to the organization, either to donate blood or to request it. They will receive a unique identification number, a password, and a status, and after logging in to the web-based application, they can input all the required details. The administrators can then arrange a meeting with the individual.

After having ongoing interactions with our client, we have identified the following requirements for the project:

- The website should display a unique landing page based on the status of the person after they log in.
- Create a dedicated webpage for Admins that grants them access to the inventory and allows them to schedule appointments with clients and donors.
- The Admin must be able to view and update the lists of both clients and donors.
- The website should maintain a record of the inventory, including the different blood types and the corresponding quantities available.

To summarize, the objectives of the product are as follows:

- Be more time efficient.
- Simplify the blood donation sign-up process and enable individuals to locate blood donors more easily.
- Streamline the process of connecting clients with blood donors by making the data more accessible and easier to retrieve.

III. Requirements Specification:

A. Functional Requirements:

- **Login:**

Once the user receives their login information from the company and logs into the website, they will need to provide three attributes: their ID, password, and status. The status can be one of three values: donor, receiver, or hospital. The system will then verify if the three attributes match those in the database and direct the user to a unique webpage based on their status.

For admins, they will be given specially formatted passwords, and they will go through the same procedure cited above.

- **User view:**

The user's view will vary based on their status:

- Receiver's view: The page that appears will prompt the user to complete five fields: their ID, blood type, phone number, reason for requiring blood, and the desired quantity of blood.
- Donor's view: Just like the receiver's view, the page that appears will prompt the user to complete three fields: their ID, blood type, phone number.
- Hospital's view: If a hospital requires a large quantity of blood for their inventory, rather than for a single patient, the website will display a dedicated page. The individual responsible for the transaction will need to fill the following fields: name, address, phone number, desired quantity of blood, and contact name.

- **Admin view:**

We will include a button labeled "admin" on the initial login page of our website for users who are not regular users. To ensure security, the admin will be required to use a password that is specially formatted. Once the admin button is clicked, a page will load that prompts the user to enter their ID and password. The system will then verify that the ID and password are both valid and accurate.

Initially, upon accessing the admin view, four buttons will be displayed, namely "Receivers", "Donors", "Hospital", and "Inventory". The admin will have the ability to access the data of any of the three clients and will be presented with two options: either to modify the client list, which includes the ability to add or remove clients, or to view and search through the existing list. Similarly, the admin will be able to access the inventory and will be given the option to update it, view it, or search through it.

- **Searching:**

Searching functionality will be exclusively accessible within the admin view, allowing the admin to enter an ID and search for receivers or donors through the buttons discussed in the previous section. Moreover, the admin will have the ability to search

the inventory by entering the ID of a specific blood type to view its quantity available in stock.

- **Updating:**

Similar to the search function, only the admin view will have access to the updating feature. The admin will be able to access the list of donors and receivers and, by utilizing their respective IDs, add new clients or remove old ones. In addition, the admin will have the capability to update the quantity of blood in the inventory by utilizing the IDs of the specific blood types.

- **Viewing:**

Access to the different client lists (donors, receivers, hospitals) and the inventory will be limited exclusively to the admin.

B. Non-Functional Requirements:

- **Security:** It is important to ensure the secure storage and retrieval of user data and prevent unauthorized access or exposure to it.
- **Ease of access:** Both users and administrators should have convenient and efficient access to the database without encountering any problems.
- **Usability**: The web application should be designed to be user-friendly and intuitive, with features that are easy to understand and navigate, in order to prevent users from becoming lost or confused.

IV. Project Management Plan:

A. Time Management:

Task Name	Start	End	Duration (days)
Project proposal	02/10/2023	02/19/2023	9
Database design	02/20/2023	02/25/2023	5
Database creation	02/26/2023	02/30/2023	4
Project mid-report	03/1/2023	03/5/2023	4
Software design	03/6/2023	03/11/2023	5
Software Implementation	03/12/2023	03/20/2023	8
Testing	03/21/2023	03/29/2023	4
Final Report	03/30/2023	04/03/2023	4

B. Procedures and Tasks Distribution:

Every member of the team has the responsibility of individually assessing the deliverables and guidelines to ensure adherence to all standards and create a satisfactory outcome. We decided to distribute the tasks equally among us, but we also decided to have regular meetings to merge everything together and evaluate each other's work to meet our deadlines.

Task	Supervisor
Database design	Chaima and Hiba
Database creation	Chaima and Adnane
Software design	Chaima and Hiba
Software Implementation	Hiba and Adnane
Testing	Chaima, Hiba and Adnane

V. Conclusion:

The proposal contains a comprehensive list of the project requirements, which our team fully intends to follow in order to create a successful application. This means that we are committed to adhering to the task distribution and requirements as specified in the proposal. We understand that the success of the project is contingent upon our

ability to meet these requirements, and we are fully prepared to invest the time and resources necessary to do so.

In upcoming assignments, we will go even deeper into the present practices and functional requirements of the project. This will enable us to gain a better understanding of the project's complexities and help us to identify any areas that may require additional attention. We will take a critical look at each aspect of the project, from the design and development to the testing and deployment phases, to ensure that each step is executed to the highest possible standard.